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CENTRAL FAX CENTER****OCT 10 2005****IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of: Joseph Smart et al.

Examiner: Theresa T. Doan

Serial No. 10/689,979

Art Unit: 2814

Filed: 10/20/2003

For: **HIGH VOLTAGE GaN-BASED TRANSISTOR STRUCTURE**Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

DECLARATION BY SHAWN GIBB PERSUANT TO 37 C.F.R. §1.132

I, Shawn Gibb, one of the inventors of the above-referenced patent application, hereby declare that the following statements are true and accurate to the best of my knowledge and belief:

1. I am currently employed as the GaN Research and Development Technical Manager at RF Micro Devices, Inc. whose headquarter is located at 7628 Thorndike Road, Greensboro, North Carolina.
2. I received a B.S. degree in Chemistry from New York University, a B.E. degree in Chemical Engineering from Stevens Institute of Technology, and a M.E. degree in Materials Engineering from Stevens Institute of Technology.
3. I have been employed continuously at RF Micro Devices, Inc. from April 2002 to present.
4. My primary job tasks include the technical management and direction of our Gallium Nitride epitaxial material efforts, including all aspects of supply chain management from substrates to finished epi wafers.
5. I have personally reviewed U.S. Patent No. 6,177,685 to Teraguchi et al. (hereinafter referred to as "Teraguchi").

6. To the best of my knowledge and belief, the AlN buffer layer (2/32) illustrated in Figures 1 and 7 does not increase the source-drain breakdown voltage of the transistors disclosed by Teraguchi.
7. To the best of my knowledge and belief, the thickness of the AlN buffer layer (2/32) of Teraguchi is 20 nanometers (see col. 3, line 31) and is not sufficiently thick to increase the source-drain breakdown voltage of the transistors disclosed by Teraguchi.
8. The AlN buffer layer (2/32) of Teraguchi increases the electron mobility of the transistors (see col. 7, line 65 – col. 8, line 2) and increasing the electron mobility of the transistors does not necessarily increase the source-drain breakdown voltage of the transistors.
9. I hereby declare that all statements made herein above of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.



Signed: Shawn Gibb

Date:

10/7/2005